REMARKS

In response to the Office Action mailed July 11, 2007, reconsideration is requested in view of the above amendments and the following remarks. Applicants have amended claims 1-11, 49-53, 57-60 and 77. Claims 26-28, 107-109, 116 and 117 are allowed. Support for the above amendments may be found throughout the specification as originally filed and no new matter has been added. The above amendments are not to be construed as acquiescence to the Examiner's stated grounds for rejection and are made without prejudice to prosecution of any subject matter removed or modified by this amendment in a related divisional, continuation or continuation-in-part application. Following the amendments, claims 1-24, 26-28, 44, 49-53, 56-62, 77, 103-109, 116 and 117 remain under examination in the application.

Objections to the Specification

The Examiner objects to the specification because, allegedly, it is unclear what is meant by "three embodiments set forth above for 'preferentially binds'". The Examiner states that it is unclear because there are numerous embodiments in the preceding sections, none of which identify themselves as any of the three embodiments for "preferentially binds".

Applicants respectfully submit that reference to the "three embodiments set forth above for "preferentially binds" can be found in paragraphs [0011] and [0012]. Reconsideration is requested.

Objections to the Claims

In reply to the Examiner's objections to the claims, the typographical error in claim 77 has been corrected and claims 57-60 have been amended to make reference to mediating at least 10% lysis of CA 125/O772P-positive tumor cells, rather than a single tumor cell. Reconsideration is requested.

Rejections Under 35 U.S.C. 112, Second Paragraph

Claims 7-11, 49-53 and 57-60 stand rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. According to the Examiner, the phrase "at least about" renders the claims indefinite. In addition, claim 77 stands rejected on the basis that the phrase "the isolated antibody" finds no antecedent basis in the claim.

Applicants respectfully traverse these rejections and submit that the claims are clear and definite and would be recognized as such by the skilled artisan. However, to advance prosecution, the subject claims have been amended to remove the term "about". In addition, claim 77 has been corrected with respect to its antecedent basis.

Rejections Under 35 U.S.C. 102

Claims 1-15, 24, 49-53, 56-62, 77 and 103-106 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by WO 00/36107 (Mitcham et al.) and under 35 U.S.C. 102(e) as allegedly being anticipated by U.S. Patent No. 6,468,546. According to the Examiner, these references teach a polypeptide, SEQ ID NO:388, that has 100% amino acid sequence identity to residues 1-439 of SEQ ID NO:1 of the present application. The Examiner further asserts that the references teach the production of polyclonal and monoclonal antibodies that bind the polypeptide and hybridomas producing monoclonal antibodies. The Examiner acknowledges that the references do not specifically teach that the antibodies to SEQ ID NO:388 preferentially bind cell-associated CA125/O772P relative to shed polypeptide, but that it would be expected that a subset of the prior art antibodies would have the same characteristics as the claimed antibodies, absent a showing of unobvious differences.

Applicants respectfully traverse this rejection and submit that the subject matter of the present claims is novel over these prior art references. The cited references describe antibody production in a general sense; however the references do not describe any specific monoclonal antibodies that bind to the repeat region identified by Applicants within SEQ ID NO:1, as currently claimed. The cited references do not identify or delineate this repeat region, do not describe or demonstrate the production of any specific monoclonal antibodies that bind

within the repeat region, and further do not teach or suggest the significance of this repeat region in any manner of particularity that would lead a skilled artisan with any reasonable expectation of success to the claimed monoclonal antibodies or the advantages they offer of preferentially binding cell-associated CA125/O772P.

Applicants further note that the presently claimed invention is defined by structural as well as functional features. The claims specify that the antibodies are of monoclonal origin and bind within a specifically defined region of SEQ ID NO:1 first identified in the present application. The antibodies are further functionally characterized by their required preferential selectivity for cell-associated versus shed CA 125/O772P which is made possible by Applicants' identification of this defined region within SEQ ID NO:1. These structural and functional features simply cannot be derived from the cited reference and, accordingly, the claimed invention is submitted to be novel over the cited references.

Reconsideration of these rejections is respectfully requested.

Rejections Under 35 U.S.C. 103

Claims 1, 13-19 and 21-24 stand rejected under 35 U.S.C. 103(a) as allegedly being obvious over WO 00/36107 (Mitcham et al.) in view of U.S. Patent No. 5,693,762 (Queen et al.) and U.S. Patent No. 6,136,310 (Hanna et al.).

According to the Examiner, Mitcham et al. teach a polypeptide, SEQ ID NO:388, that has 100% amino acid sequence identity to residues 1-439 of SEQ ID NO:1 of the present application. The Examiner further asserts that the reference teaches the production of polyclonal and monoclonal antibodies that bind the polypeptide and hybridomas producing monoclonal antibodies. The Examiner acknowledges that the reference does not teach that the antibodies are chimeric, comprise a Cγ1 or Cγ4 constant region, or are humanized, bi-specific or multi-specific. However, according to the Examiner, Queen et al teach humanized antibodies comprising CDRs from non-human donor VH and VL chains, human framework and constant regions and that the humanized antibodies bind the same antigen as the non-human donor antibodies providing the CDRs. Also according to the Examiner, Hanna et al. teach that the amino acid and DNA sequences which encode human gamma 1 and gamma 4 constant domains are known in the art

and that the reference also teaches production of chimeric, humanized monoclonal antibodies using gamma 1 or gamma 4 constant domains for therapy. The Examiner concludes that it would have been obvious to one skilled in the art to make chimeric, humanized monoclonal antibodies of the antibodies allegedly taught by Mitcham et al.

Applicants respectfully traverse this rejection.

As noted above, Mitcham et al. do not teach the elements of Applicants' claimed invention. More specifically, Mitcham et al. fail to identify or delineate the claimed repeat region of SEQ ID NO:1 corresponding to residues 14-452, fail to describe or demonstrate the production of any specific monoclonal antibodies that bind within the repeat region, and further fail to teach or suggest the significance of this repeat region with any degree of particularity that would lead a skilled artisan with any reasonable expectation of success to the claimed monoclonal antibodies or the advantages they offer of preferentially binding cell-associated CA125/O772P.

Furthermore, the deficiencies of Mitcham et al. are not remedied by the disclosures of Queen et al. and/or Hanna et al., as these references offer nothing in relation to CA125/O772P. These cited references deal generally with certain antibody production techniques but clearly do not teach, suggest or otherwise lead the skilled reviewer of Mitcham et al. to the elements of the invention as it is presently claimed by Applicants. As the structural and functional elements of Applicants' claims are neither taught nor suggested by the cited combinations of references, the references would not lead the skilled artisan to the claimed invention with any reasonable expectation of success.

Reconsideration is respectfully requested.

Claims 1, 15 and 20 stand rejected under 35 U.S.C. 103 as allegedly being obvious over WO 00/36107 (Mitcham et al.) in view of Yang et al. (Cancer Research, 1999, 59: 1236-1243). According to the Examiner, Mitcham et al. teach a polypeptide, SEQ ID NO:388, that has 100% amino acid sequence identity to residues 1-439 of SEQ ID NO:1 of the present application. The Examiner further asserts that the reference teaches the production of polyclonal and monoclonal antibodies that bind the polypeptide and hybridomas producing monoclonal

antibodies. The Examiner acknowledges that Mitcham et al. do not teach human antibodies but asserts that Yang et al. teach human antibodies and their administration as therapeutics.

Applicants respectfully traverse this rejection.

As above, Mitcham et al. do not teach the elements of Applicants' claimed invention. More specifically, Mitcham et al. fail to identify or delineate the claimed repeat region of SEQ ID NO:1 corresponding to residues 14-452, fail to describe or demonstrate the production of any specific monoclonal antibodies that bind within the repeat region, and further fail to teach or suggest the significance of this repeat region with any degree of particularity that would lead a skilled artisan with any reasonable expectation of success to the claimed monoclonal antibodies or the advantages they offer of preferentially binding cell-associated CA125/O772P.

Furthermore, the deficiencies of Mitcham et al. are not remedied by the disclosure of Yang et al., as this reference offers nothing in relation to CA125/O772P. The cited reference deals with administration of human antibodies but clearly does not teach, suggest or otherwise lead the skilled reviewer of Mitcham et al. to the elements of the invention as it is presently claimed by Applicants. As the structural and functional elements of Applicants' claims are neither taught nor suggested by this combination of references, the references would not lead the skilled artisan to the claimed invention with any reasonable expectation of success.

Reconsideration is respectfully requested.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Applicants respectfully submit that all of the claims remaining in the application are now believed to be in condition for allowance. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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